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Description

Insulation displacement contact, and a connecting terminal

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FIELD OF THE INVENTION generally
The invention relates to an insulation displacement contact, for example, for terminal strips, which has a slotted, sprung contact region as a contact-making slot on a connecting bracket, wherein the contact region is

10 surrounded and reinforced by an outer spring slip. Such

BACKGROUND OF THE INVENTION
A known insulation displacement contact is known from DE-C1-197 32 1828, for example. Further,

DE 85 25 981 U1 discloses a two-part insulation displacement contact element, in which two separate contact elements having a contact-making slot are used. These surround both sides of a conductor with which contact is to be made, and pinch this conductor between them. When contact has been made, the first contact element in this case surrounds the other, like a spring clip. The respective contact-making slots are in this case widened like funnels in their entry region, forming an insulation displacement contact. In this embodiment, the insulation displacement contacts must be operated like tongs once the conductor has been inserted.

In the described, known insulation displacement contact, the material of the spring clip can be matched to the spring characteristics, and the contact region can be matched by shaping and the material coming to a compromise in order to achieve a cutting region and a contact region.

SUMMARY OF THE INVENTION

35 The invention is based on the object of developing the described insulation displacement contact further, such

that its cutting characteristics and contact characteristics can be even better matched.

5 The described object is achieved by an insulation
displacement contact as claimed in claim 1. ^{for example} In this
case, the spring clip is designed to form an insulation
displacement blade in at least one end region. This
results in a cutting blade, or initial cutting blade in
an initial cutting region, ^{composed} of mechanically
10 particularly hard materials. ^{As such,} ~~so that~~ even cold, brittle
insulation on a conductor can easily be cut down to a
conductive core. The shape of the contact region in the
interior of the contact-making slot can also be matched
to achieve particularly good contact characteristics.
15 The contact-making slot can thus be formed with blunt
contact zones in order to protect a contact core. ^{since}
~~this is due to the fact that~~ the cutting blades which are formed from the spring
clip, can be matched not only in terms of the initial
cutting characteristics but also, if required, in terms
20 of their secondary cutting characteristics.

The spring clip and cutting blades which are formed from the spring clip may be formed from suitably hard material. If required, the cutting blades may be specially hardened. The contact region may be formed
5 from electrically highly conductive material.

The insulation displacement contact can advantageously be designed for use in a connecting terminal, in particular in a terminal strip, such that each connecting bracket forms a contact-making slot at each of its ends.

The spring clip and/or connecting bracket can advantageously be designed such that the limbs of the
15 spring clip secure the contact-making slot in its position.

A connecting terminal having at least one insulation displacement contact can advantageously be provided according to one of the embodiments described above. In particular, a terminal strip having at least one insulation displacement contact can be provided in the embodiments described above.

BRIEF DESCRIPTION OF THE DRAWINGS

25 The invention will now be explained in more detail with
reference to an exemplary embodiment which is
illustrated, in perspective form, in the drawing, and
in which:

9. ~~The drawing illustrates~~
DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

30 a slotted, sprung contact region ~~is in each case~~ formed
as a contact-making slot 2 on a connecting bracket 1.
This contact region is surrounded by an outer spring
clip 3, reinforcing its spring effect. ⁹The spring clip
3 is designed to form cutting blades 4 in at least one
35 end region, in the exemplary embodiment, ^{shown in the drawing,} in both end
regions. The cutting blades 4 form a V-shaped entry
region for initial cutting and for cutting open the
insulation of a conductor to be inserted and to be

connected. This can be followed by a secondary cutting region and also by the contact region itself. In the exemplary embodiment, a subsequent

shown in the drawing

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cutting region 5 is followed by a contact region 6, which is advantageously formed to be blunt and to be ~~composed~~ of electrically highly conductive material, thus protecting a conductor core. A secondary cutting
5 region 5 may be in the form not only of the spring clip but also in the form of the connecting bracket 1, depending on the specific requirements.

10 The spring clip 3 and connecting bracket 1 in the exemplary embodiment have recesses and tongues such that the limbs of the spring clip 1 secure the contact-making slot 2 in its position. This prevents the limbs from being tilted and deflected into a number of planes, even when a number of conductors are inserted.

15 In the exemplary embodiment, the connecting bracket 1 forms a contact-making slot 2 at each of its ends.

20 A connecting terminal having at least one insulation displacement contact can advantageously be formed in one of the described embodiments. In particular, a terminal strip having screwless connections can be formed in this way.

VARIATIONS
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